

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Alexander S. KRYLOV, et al.

Title: USE OF GENERIC  
OLIGONUCLEOTIDE  
MICROCHIPS TO DETECT  
PROTEIN-NUCLEIC ACID  
INTERACTIONS

Appl. No.: 10/035,042

Filing Date: December 27, 2001

Examiner: Unknown

Art Unit: Unknown

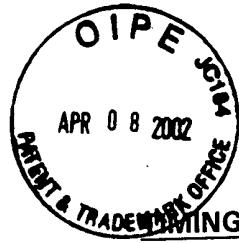
<b>CERTIFICATE OF MAILING</b>	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on the date below.	
<b>Robert N. Young</b>	
(Printed Name)	
	
(Signature)	
<b>March 27, 2002</b>	
(Date of Deposit)	

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.



COPY OF PAPERS  
ORIGINALLY FILED Atty. Dkt. No. 051583-0252

ATTACHMENT OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b),  
within three (3) months of the filing date of the application.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447.



Atty. Dkt. No. 051583-0252

Respectfully submitted,

By 

Robert N. Young  
Attorney for Applicant  
Registration No. 48,412

Date March 27, 2002

FOLEY & LARDNER  
Customer Number: 23524

**\*23524\***

**23524**

PATENT TRADEMARK OFFICE

Telephone: (608) 258-4991  
Facsimile: (608) 258-4258

CCPY OF PAPERS  
ORIGINALLY FILED

Form PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 051583-0252	SERIAL NO. 10/035,042		
INFORMATION DISCLOSURE CITATION <i>(APR 04 1982 several sheets if necessary)</i>		APPLICANT Alexander S. KRYLOV, et al.					
		FILING DATE December 27, 2001	GROUP ART UNIT Unknown				
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS SUB- CLASS		
<b>FOREIGN PATENT DOCUMENTS</b>							
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS SUB- CLASS	TRANSLATION	
						YES	NO
<i>CCPY OF PAPERS ORIGINALLY FILED</i>							
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
		Rouviere-Yaniv, J., et al., "Characterization of a novel, low-molecular-weight DNA-binding protein from <i>Escherichia coli</i> ," Proc. Nat. Acad. Sci. USA, Vol. 72, No. 9, pp. 3428-3432, September 1975, published by the National Academy of Sciences, Washington, D.C.					
		Rouviere-Yaniv, J., et al., "Histone-Like Proteins in Prokaryotic Organisms and Their Interaction with DNA," The Organization and Expression of the Eukaryotic Genome, 1977, published by Academic Press Inc., London, England.					
		Gilbert, W., et al., "Contacts Between the LAC Repressor and DNA Revealed by Methylation," Control of Ribosome Synthesis, pp. 139 - 148, 1976, published by Academic Press Inc., New York, New York.					
		Rouviere-Yaniv, J., et al., "Native <i>Escherichia coli</i> HU Protein is a heterotypic Dimer," FEBS Letters, Vol. 106, No. 2, pp. 297-300, October 1979, published Elsevier/North-Holland Biomedical Press.					
		Rouviere-Yaniv, J., et al., "E. coli DNA Binding Protein HU Forms Nucleosome-like Structure with Circular Double-Stranded DNA," Cell, Vol. 17, pp. 265-274, June 1979, published by MIT.					
		Zasedatelev, A.S., et al., "Mechanism of 'Recognition' of AT Pairs in DNA by Molecules of Hoechst 33258 Dye," Doklady Biochemistry, Vol. 255, Nos. 1-6, May 1981, published by Plenum Publishing Corp.					
		Holck, A., et al., "Affinity of protein HU for different nucleic acids," FEBS Letters, Vol. 185, No. 1, pp. 121-124, June 1985, published by Elsevier Science Publishers B.V.					
		Bonnefoy, E., et al., "HU and IHF, two homologous histone-like proteins of <i>Escherichia coli</i> , form different protein -- DNA complexes with short DNA fragments," The EMBO Journal, Vol. 10, No. 3, pp. 687-696, 1991, published by the Oxford University Press.					

		Bonnefoy, E., et al., "DNA-binding Parameters of the HU Protein of <i>Escherichia coli</i> to Cruciform DNA," <i>J. Mol. Biol.</i> , Vol. 242, pp. 116-129, 1994, published by Academic Press Limited.	9
		Claret, L., et al., "Regulation of HU $\alpha$ and HU $\beta$ by CRP and FIS in <i>Escherichia coli</i> ," <i>J. Mol. Biol.</i> , Vol. 263, pp. 126-139, 1996, published by Academic Press Limited.	10
		Yershov, G., et al., "DNA analysis and diagnostics on oligonucleotide microchips," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 93, pp. 4913-4918, May 1996, published by the National Academy of Sciences, Washington, D.C.	11
		Timofeev, E. N., et al., "Regioselective immobilization of short oligonucleotides to acrylic copolymer gels," <i>Nucleic Acids Research</i> , Vol. 24, No. 16, 1996, published by the Oxford University Press.	12
		Schena, M., et al., "Parallel human genome analysis: Microarray-based expression monitoring of 1000 genes," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 93, pp. 10614-10619, October 1996, published by the National Academy of Sciences, Washington, D.C.	13
<b>COPY OF PAPERS ORIGINALLY FILED</b>		Chee, M., et al., "Accessing Genetic Information with High-Density DNA Arrays," <i>Science</i> , Vol. 274, pp. 610-614, 25 October 1996, published by the American Association for the Advancement of Science, Washington, D.C.	14
		Petri, V., "Quantitative nucleic acids footprinting: thermodynamic and kinetic approaches," <i>Biotechnology</i> , Vol. 8, pp. 36-44, 1997, published by Current Biology Ltd.	15
		Guschin, D., et al., "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," <i>Analytical Biochemistry</i> , Vol. 250, pp. 203-211, 1997, published by Academic Press.	16
		Fox, K. R., "Dnase I Footprinting," from <i>Method in Molecular Biology</i> , Vol. 90: Drug-DNA Interaction Protocols, pp. 1-23, 1997, edited by K. R. Fox, published by Humana Press, Inc., Totowa, New Jersey.	17
		Wodicka, L., "Genome-wide expression monitoring in <i>Saccharomyces cerevisiae</i> ," <i>Nature Biotechnology</i> , Vol. 15, pp. 1359 - 1367, December 1997, published by Nature America, Inc., New York, New York.	18
		Fotin, A. V., et al., "Parallel thermodynamic analysis of duplexes on oligodeoxyribonucleotide microchips," <i>Nucleic Acids Research</i> , Vol. 26, No. 6, pp. 1998, published by Oxford University Press.	19
		Hamdan, I. I., et al., "Use of capillary electrophoresis in the study of ligand-DNA interactions," <i>Nucleic Acids Research</i> , Vol. 26, No. 12, pp. 3053-3058, 1998, published by Oxford University Press.	20
		Eisen, M. B., et al., "Cluster analysis and display of genome-wide expression patterns," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 95, pp. 14863-14868, December 1998, published by The National Academy of Sciences.	21
		Kamashev, D., "The binding motif recognized by HU on both nicked and cruciform DNA," <i>The EMBO Journal</i> , Vol. 18, No. 19, pp. 5434-5444, 1999, published by the European Molecular Biology Organization.	22
		Drobyshev, A. L., "Massive parallel analysis of DNA-Heechst 33258 binding specificity with a generic oligodeoxyribonucleotide microchip," <i>Nucleic Acids Research</i> , Vol. 27, No. 20, pp. 4100 - 4105, 1999, published by Oxford University Press.	23

- \* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.